



## Idaho State Department of Agriculture 2005 Grasshopper and Mormon Cricket Suppression Program Summary

### **Introduction**

Grasshoppers and Mormon crickets continue to be one of the most serious pest problems in Idaho rangelands and adjacent croplands. Based on annual surveys conducted by USDA, PPQ, Idaho has experienced very serious pest outbreaks during the last few years. The management and the timely control of grasshopper and Mormon cricket populations are very high priorities for the Idaho State Department of Agriculture (ISDA) and our cooperators at USDA, APHIS. Congress has addressed this environmental crisis with special funding to the impacted states of Idaho, Utah, and Nevada.

### **Background**

Sixty-four percent of Idaho lands are administered by the Federal Government and 43% percent of the state (21.8 million acres) is classified as rangelands. BLM administers 11.8 million acres in Idaho, much of it prime grasshopper/Mormon cricket habitat. There is a significant area of grasshopper and Mormon cricket habitat on federal lands that borders private rangeland and irrigated cropland in the state. Mormon crickets and grasshoppers (primarily about six species) are cyclical economic pest problems particularly in southern Idaho.

### **Summary of Grasshopper Survey Results**

Most areas of southern Idaho did not experience major grasshopper outbreaks in 2005. Small infestations were detected in Treasure Valley, Magic Valley, and in southeast Idaho. Surveys in western and northern Idaho found extremely heavy infestations in Gem, Payette, Washington, Adams, Valley, Clearwater, Nez Perce, Idaho, and Lewis Counties. The populations in western Idaho are very troubling because the history of major grasshopper outbreaks in Idaho indicates that they begin in the west and spread eastward over the course of a few seasons. Species composition in outbreak areas consisted primarily of *Melanoplus sanguinipes*, *Melanoplus femur-rubrum*, and *Camnula pellucida*. *Melanoplus bivittatus*, *Aulocara elliotti* and *Oedaleontus enigma* were abundant in localized areas. Exceptionally heavy rainfall in May did not seem to have any detrimental effect on populations. The late summer and fall season should have allowed exceptional oviposition opportunities, and there are currently no factors that would indicate any reason to expect major decreases in overall grasshopper populations in 2006. It is reasonable to expect that significant grasshopper outbreaks might occur in 2006.

### **Summary of Mormon Cricket Survey Results**

In southwestern Idaho, the Mormon cricket outbreak which has been building in Owyhee County continued in 2005. We anticipate this large infestation may have reached its peak, and treatments have reduced local elements of the outbreak. The infestation extended eastward about 40 miles from the Oregon border and southward about 70 miles from the Snake River. There is also an infestation of Mormon crickets in Gooding, Camas, Elmore, Ada, Boise, Gem, and Washington Counties. Control activities over the past few years seem to have diminished populations in some areas, but the overall outbreak stretches about 125 miles from north of Gooding to the Snake River west of Cambridge. Populations appear to be increasing in the western part of the outbreak. In Eastern Idaho the infestation is continuing to build in Oneida, Power and Bannock Counties. This infestation extends about 25 miles from the Utah state line to areas around McCammon and Rockland. A small infestation was detected in Fremont County.

### **Summary of ISDA Program**

In 2005 ISDA continued to suppress outbreaks of grasshopper and Mormon crickets statewide. Over 500 landowners in twenty counties received various assistance in the form of bait or cost share spray projects. Over 192,438 lbs of bait was distributed to private landowner down from 368,982 lbs distributed in 2004. Seven cost share application projects protected 5,681 acres with ISDA assistance of nearly \$20,919 to cover 2/3 of the treatment costs. In addition ISDA protected impacted state and county lands primarily along county road right of ways.

**2005 – ISDA APPLICATION COST SHARE PROJECTS FOR PRIVATE  
AND STATE RANGELAND GRASSHOPPER AND MORMON CRICKET SUPPRESSION**

Project / Location	Acres Treated	Total Protected Acres*	Insecticide	Cost to ISDA** (2/3)	Cost to Private Landowner (1/3)	Total Project Cost	Cost Per Acre Treated	Cost Per Acre Protected
Kooskia Area 1 Idaho County	250	500	Lorsban 4E	\$1,494.78	\$746.27	\$2,241.05	\$8.96	\$4.48
Kooskia Area 2 Idaho County	100	100	Lorsban 4E	\$748.86	\$373.87	\$1,122.73	\$11.23	\$11.23
Emmett Gem County	541	1,082	Dimilin 2L	\$1,980.00	\$917.59	\$2,897.59	\$5.36	\$2.68
Stites Idaho County	1,290	1,290	Asana XL	\$11,681.35	\$5,831.92	\$17,513.27	\$13.58	\$13.58
Nezperce & Grangeville 1 Idaho & Lewis Counties	80	160	Asana XL	\$693.43	\$346.20	\$1,039.63	\$13.00	\$6.50
Nezperce & Grangeville 2 Idaho & Lewis Counties	155	155	Asana XL	\$1,399.93	\$698.92	\$2,098.85	\$13.54	\$13.54
State (IDL) Lands Oreana area, Multiple Cooperative Projects with PPQ	1,197	2,394	Dimilin 2L	\$2,920.68	0 State lands	\$2,920.68	\$2.44	\$1.22
Totals	3,613	5,681		\$20,919.03	\$8,914.77	\$29,833.80	\$8.26	\$5.25

\*A Reduced Agent and Area Treatments (RAATS) system was employed on some projects reducing total acres actually treated with insecticide but increasing protected acres. Treatments are applied by alternating treated swaths with untreated swaths (refuges) with adequate control and reduced use of insecticide.

\*\*The ISDA cost share program for 2005 paid 2/3 of the total treatment cost. The private land owners were responsible for the remaining 1/3.

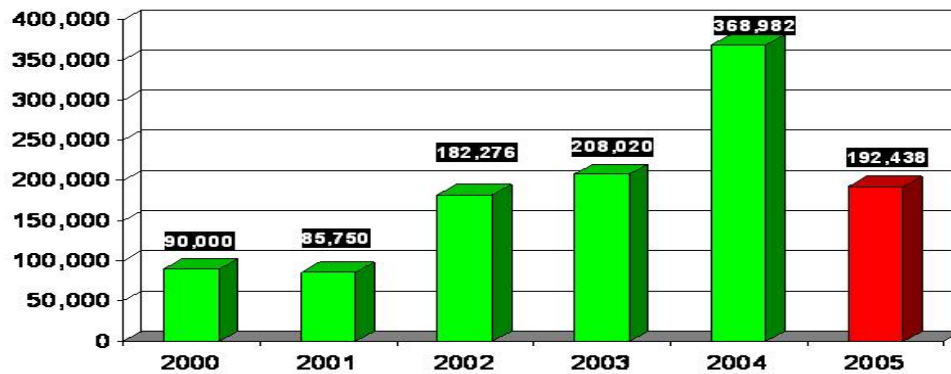
**ISDA 2005 CARBARYL GROUND BAITING TREATMENTS ON COUNTY ROAD RIGHT OF WAYS AND STATE LANDS**

County	Pounds Applied	Acres Treated
Ada	1,350	135
Elmore	675	68
Gem	500	50
Owyhee	7,850	785
Washington	1,800	180
Total	12,175	1,218

**2005 - ISDA BAIT DISTRIBUTIONS FOR PRIVATE LAND MORMON CRICKET AND GRASSHOPPER SUPPRESSION**

Rank	County	Carbaryl Bait Distributed (lbs)	Number of Distributions
1	Idaho	73,500	199
2	Nez Perce	30,250	93
3	Power	17,800	23
4	Oneida	16,900	26
5	Owyhee	16,612	76
6	Elmore	12,550	18
7	Boise	11,562	78
8	Washington	4,800	26
9	Gem	2,232	13
10	Ada	1,194	7
	10 Other Counties	5,038	32
	<b>Total</b>	<b>192,438</b>	<b>538</b>

**ISDA GRASSHOPPER AND MORMON CRICKET SUPPRESSION PROGRAM**  
**POUNDS OF CARBARYL BAIT DISTRIBUTED TO PRIVATE LANDOWNERS 2000-2005**



**ISDA GRASSHOPPER/MORMON CRICKET PROGRAM - MAJOR COOPERATORS**

During the 2005 season the following cooperators provided significant help in bait distributions and overall program delivery:

- University of Idaho, Extension Service
- Seminis Seed Company, Nampa, ID
- Randy Rowe Trucking Company, Twin Falls, ID
- Owyhee County Sheriff's Department, Murphy, ID
- Boise County Road Department, Gardena, ID
- Jim's Lumber, Mountain Home, ID
- Cambridge Lumber Inc. Cambridge, ID
- The McGregor Company – Grangeville & Lewiston, ID
- Primeland Cooperative – Grangeville & Lewiston, ID
- Agri-Line Irrigation, Grand View, ID
- Gem County Mosquito Abatement Program, Emmett, ID
- Valley County Weed Program, Cascade, ID